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### (54) Coating apparatus and coating method

(57) A coating apparatus of the present invention comprises coating solution supply sources (71A to 71D, 201) for supplying a coating solution, a mounting table (52) for holding a substrate to allow a surface to be coated to face upward, nozzles (86A to 86D, 205) for pouring the coating solution toward the surface of the substrate to be coated, mounted on the mounting table, a pump chamber (63) capable of swinging its volume and having a sucking port for introducing the coating solution from the coating solution supply source and a spouting port for spouting the coating solution and to be supplied toward the nozzle, pump driving mechanisms (65, 66, 66a to 66c, 68a to 68c) for increasing and decreasing an inner pressure of the pump chamber to introduce and spout the coating solution into/from the pump chamber, a filter (73, 73A, 203) provided inside or at the upstream side of the pump chamber for filtrating the coating solution before the coating solution is spouted out from the pump chamber through the spouting outlet, a valve (76, 204) provided between the pump chamber and the nozzle for regulating a flow amount of the coating solution to be sent from the pump chamber to the nozzle, and a controller (198) for controlling the operation of the pump driving mechanism in such a manner that a sucking speed of the coating solution into the pump chamber is smaller than a spouting speed of the coating solution from the pump chamber.

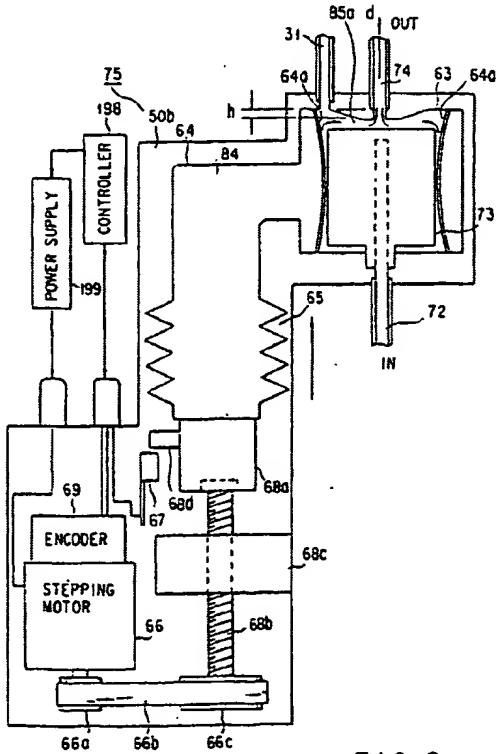


FIG. 8